

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Explosive atmospheres –
Part 29-1: Gas detectors – Performance requirements of detectors for flammable
gases**

**Atmosphères explosives –
Partie 29-1: Détecteurs de gaz – Exigences d'aptitude à la fonction des
détecteurs de gaz inflammables**



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EXPLOSIVE ATMOSPHERES –

Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by IEC technical committee 31: Equipment for explosive atmospheres.

The text of this interpretation sheet is based on the following documents:

ISH	Report on voting
31/809/ISH	31/817/RVD

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

There has been a request for formal interpretation of the drop test fail criterion in the performance standard IEC 60079-29-1 (2007), Subclause 5.4.14.

The fail criterion is:

“The apparatus shall be considered to have failed this test if there is a loss of function (e.g. alarm, pump function, controls, display) after the test”.

Question:

Is the interpretation of this text, that the loss of function, even in a short period during the interruption and until restart of the equipment will fail the test? Or is a permanent loss of function needed to fail the equipment, e.g. a broken display or a pump, which cannot restart?

Bouncing of a battery spring in the moment of impact can cause the drop out of power in battery supplied equipment, and make it shut down. Is this considered as sufficient to fail the test? Or would it be sufficient safe situation for the user if the equipment could restart and show the correct measurement?

Interpretation:

Any loss of function after the test including any change of state is considered a failure since there is continued dependency on the life safety device even under adverse affects such as an accidental drop of the device during use. Automatic or manual re-starting is not acceptable.

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EXPLOSIVE ATMOSPHERES –**Part 29-1: Gas detectors –
Performance requirements of detectors for flammable gases**

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International Standard IEC 60079-29-1 has been prepared by IEC technical committee 31: Equipment for explosive atmospheres.

This first edition of IEC 60079-29-1 cancels and replaces the first edition of IEC 61779-1 to IEC 61779-5:1998 series and constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- Subclause 4.2.3 (Alarm or output functions) was modified to ensure alarm devices can not be adjustable outside their measuring range and to include requirements for de-activation of alarm devices.
- Subclause 4.2.7 (Stand-alone gas detection apparatus for use with separate control units) was added to allow separate evaluation of detection apparatus providing an industry recognized output signal.